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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,147	10/08/2003	Gustav Ohnsmann		8215

7590 04/12/2006
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EXAMINER

KASTLER, SCOTT R

ART UNIT PAPER NUMBER

1742

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

C4

Office Action Summary	Application No. 10/682,147	Applicant(s) OHNSMANN, GUSTAV	
	Examiner Scott Kastler	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application (PTO-152) |
| 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/30/2006 has been entered.

Claim Objections

Claims 2, 3, 4 and 6 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The above claims do not further limit independent apparatus claim 1 because, with respect to the above claims 2 and 3, the recitation of “high” strengths and elasticities, or “low” thermal conductivities or heat accumulations are at best relative limitations which could be read to include any value of the recited properties. With respect to claims 4 and 6, the terms “can comprise” and “can be lined” do not fairly further limit claim 1 because claim 1 also includes layers which “can be lined” or “can comprise multiple layers” Appropriate correction is required.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of the instant disclosure in view of Reuter, further in view of either of Chang et al and Hofmann et al. The admitted prior art of the instant disclosure, as expressed at pages 1-2, of the originally filed specification for example, teaches an open and closed vessel for holding hot and molten metals and to transport said metals comprising heater elements or inductive heaters including an integral riser pipe showing all aspects of the above claims except the use of a "textile 3D-surface structure" lining the inner space of the vessel. Reuter teaches that it was well known in the crucible art at the time the invention was made to employ a ceramic fiber (amorphous silicon dioxide) inner lining for crucibles (see col. 2 lines 1-3 for example) with a thermally insulating material (13) subtending the cavity of fiber ceramic materials, in order to provide a strong yet lightweight crucible (see col. 1 lines 10-45 for example). Because increased strength with light weight (which would allow increased operation efficiency) would also be desirable in the vessels disclosed by the admitted prior art of the instant disclosure, motivation to employ the textile 3D-surface structure lining of Reuter in the vessels of the admitted prior art of the instant disclosure, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. Both of Chang et al (col. 3 line 28 for example) and Hofmann et al (col. 1 lines 36-40 for example) teach that silicon dioxide is an old and very well

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known ceramic material (see Chang et al especially, where the exact material recited in Reuter, amorphous silicon dioxide fiber, is specifically named as a well known ceramic material).

Response to Arguments

Applicant's arguments filed 3/30/2006 have been fully considered but they are not persuasive. Applicant's argument that silicon dioxide is not a ceramic material is not persuasive. As recited in the above rejection both of Chang et al and Hofmann et al are cited as examples of numerous teachings in the refractory arts that silicon dioxide, specifically the amorphous silicon dioxide fibers recited by Reuter is considered a ceramic.

Applicant's further argument that the vessels of the admitted prior art of the instant disclosure are not vessels made of metal is not persuasive because as clearly stated in paragraph [0003] of the instant specification, vessels of the prior art may be made of cast iron, cast steel or metal plate.

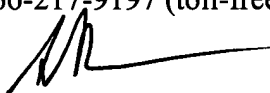
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Scott Kastler
Primary Examiner
Art Unit 1742

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